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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/353,448	07/14/1999	YOSHIO SAKATA	32178-149711	3541

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EXAMINER	
NGUYEN, DUC MINH	
ART UNIT	PAPER NUMBER
2643	5

DATE MAILED: 04/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/353,448	Applicant(s) SAKATA ET AL.	
	Examiner Duc Nguyen	Art Unit 2643	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-3 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-3 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshida et al (JP407264279A).

Consider claim 1. Yoshida teaches an echo canceler for eliminating echos produced through an echo path formed between a loudspeaker (109 or 111) and microphone (114), comprising an adaptive digital filter (112a); an attenuator (115); and a subtracter (105a). In order for the echo canceler to cancel the unwanted echo signal completely, the pseudo echo signal produced by ADF (112a) must have an amplitude that substantially equals to the amplitude of the signal produced by attenuator (115), but 180 degrees out of phase. Fig. 1 clearly shows controller (113) controls both the ADF (112a) and the attenuator (115). There is a great possibility and inherent that the controller (113) controls the amplitude of the signal produced by the ATT (115) to substantially match with the pseudo echo signal produced by ADF (112a), so that echo signal can be canceled completely. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to control the amplitude of the signal

produced by the ATT (115) to substantially match with the pseudo echo signal produced by ADF (112a), so that echo signal can be canceled completely.

3. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshihama et al (JP408279777A).

Consider claim 2. Yoshihama teaches an echo canceler for eliminating echos produced through an echo path formed between a loudspeaker (connected to line 16, fig. 1)) and microphone (connected to line R), comprising an adaptive digital filter (ringer buffer 12 and echo estimator 11; see also fig. 3); a subtracter (14); and an amplifier (13) used to amplify the pseudo echo signal so that the amplitude level of the pseudo echo signal is matched to that of the echo noises. In order for the echo canceler to cancel the unwanted echo signal completely, the pseudo echo signal produced by ADF (ringer buffer 12 and echo estimator 11; see also fig. 3) must have an amplitude that substantially equals to the amplitude of the echo signal (R), but 180 degrees out of phase. Therefore, there is a great possibility and inherent that the pseudo echo signal produced by the amplifier (13) must substantially match with the echo signal (R), so that echo signal can be canceled completely. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to control the pseudo echo signal produced by the amplifier (13) to substantially match with the echo signal (R), so that echo signal can be canceled completely.

4. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fujisaki et al (JP362269451A).

Consider claim 3. Fujisaki teaches an echo canceler for eliminating echos produced through an echo path formed between a loudspeaker (6) and microphone (7), comprising an adaptive digital filter (4); a subtracter (5); and an amplifier (2; see fig. 1). In order for the echo canceler to cancel the unwanted echo signal completely, the pseudo echo signal (^y) produced by ADF (4) must have an amplitude that substantially equals to the amplitude of the echo signal produced by the amplifier (3), but 180 degrees out of phase. There is a great possibility and inherent that the amplitude of the pseudo echo signal is substantially matched to that of the echo noises, so that echo signal can be canceled completely. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to control the amplitude of the pseudo echo signal substantially matched to that of the echo noises, so that echo signal can be canceled completely.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Duc Nguyen whose telephone number is (703) 308-7527.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Kuntz, can be reached on (703) 305-4708.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(703) 872-9314 (Group's Fax numbers)
(703) 746-7251 (Examiner's Fax number, only for proposed amendment)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington. VA., Sixth Floor (Receptionist).

April 4, 2003

DUC NGUYEN
PRIMARY EXAMINER